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Medicine and Health Sciences
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Departmental capacity building event at Goudini, 2022

Family and emergency **medicine research: 2022**

forward together
sonke siya phambili
saam vorentoe

Department of Family and Emergency Medicine, Faculty of Medicine and Health Sciences, Stellenbosch University

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Introduction

This booklet presents the research output from the Department of Family and Emergency Medicine, Faculty of Medicine and Health Sciences at Stellenbosch University for the year 2022. The research projects that were completed or published during this year are presented in abstract format. An email address for one of the authors is given for each abstract and a link to the full publication where appropriate.

An important part of the research process is the dissemination of the findings to stakeholders and policymakers, particularly the Department of Health in the Western Cape where the majority of the research was performed.

We realise that many people may even be too busy to read the abstracts and therefore we have tried to capture the essential conclusions and key points in a series of "sound bites" below. Please refer to the abstract and underlying study for more details if you are interested.

We have framed this body of work in terms of a typology suggested by John Beasley and Barbara Starfield:

Basic research: Studies that develop the tools for research

Clinical Research: Studies that focus on a particular disease or condition within the burden of disease.

Health Services Research: Studies that focus on service delivery and issues such as access, continuity, co-ordination, comprehensiveness, efficiency or quality.

Health Systems Research: Studies that speak more to the building blocks of the health system and development of policy.

Educational Research: Studies that focus on issues of education or training of health professions.

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"Sound bites" for policy and decision makers

Clinical research

HIV and TB

Active surveillance for TB in the community was dependent on successful implementation of community-orientated primary care, and not the TB programme per se. Community health workers were central to this and their ability to engage with healthcare workers at the primary care facility, the community itself and other stakeholders, particularly social services.

In Diepsloot, male medical circumcision, to prevent HIV transmission, was more likely in those who were students, attended mainline Christian churches, did not speak Zulu and were not migrants. A number of factors were identified that could shape health promotion messages and that were related to feeling susceptible and seeing HIV as a serious health problem.

Diagnosing TB in people with HIV in the emergency centre should rely more on the LF-LAM test (Lateral Flow Urine Lipoarabinomannan assay). This has both useful positive predictive value (after eliciting symptoms of TB) and negative predictive value (in conjunction with point of care ultrasound)

COVID-19

The combination of COVID-19 with severe diabetic emergencies such as diabetic ketoacidosis was particularly challenging to manage. In the intensive care unit of a tertiary hospital 65% of COVID-19 patients died and 91% of those who were intubated. Mortality was associated with being intubated, having HIV and myalgia.

In primary care, service disruption and re-organisation impacted on people with diabetes. More people were registered with the central dispensing unit and received a medication parcel (often via a community health worker), utilisation of primary care dropped and glycaemic control decreased.

Diabetes

The Metro Health Services had 116726 people with diabetes on its database. Of these, 70% also had hypertension and 16% a mental health disorder. The overall mean HbA1c was 9%, 70% had not received their annual HbA1c, 75% were poorly controlled and 63% had one or more hospitalisations.

The GREAT for diabetes WhatsApp Chatbot was shown to be feasible in reaching patients in the public sector via a smartphone. The educational programme was helpful to 90% of users and on completion 88% were more confident in self-management, 71% had changed their self-management "a lot" and 76% had made behavioural or lifestyle changes. This has the potential to make a difference at scale and we await further policy decisions from the Department of Health.

Initiating patients on insulin is another roadblock in improving glycaemic control and avoiding complications. Initiation is however often avoided or unsuccessful due to a lack of time to properly counsel patients and address their fears, a lack of educational resources, and a lack of capacity to demonstrate what to do. Group empowerment, telehealth or digital solutions might all help in overcoming these obstacles.

Maternal, child and women's health

Women attending a district hospital emergency centre for spontaneous abortion needed a more person-centred approach. Their experience was characterised by issues with the physical environment (lack of cleanliness and privacy), unhelpful staff attitudes and behaviours, long waiting times for assistance, and insufficient information about what was happening and treatment options. Sequential coordination of care also needed improvement so that women could be followed-up in the primary care facilities.

Women attending rural primary care facilities for family planning services found that their "Big-5" concerns were not adequately addressed – weight change, no bleeding or abnormal bleeding, pain, fertility effects and risk of cancer. For teenagers, particularly, family planning remained highly moralised and stigmatised, thus impeding access and utilisation.

Utilisation of decentralised and more accessible colposcopy services at a district hospital depended on person-centredness and shared-decision making with women in primary care, family and social influences, safety netting and tracing of those lost to follow up, and the efficiency of administrative processes, which could erode trust in the service.

In Vhembe district, Limpopo, 32% of pregnant women were anaemic. Of these 3% were severe and 38% moderate. Adherence to iron and folate supplements was good, but stock outs were experienced by up to 30% of women. Anaemia was related to food insecurity.

In Kenya, 8.7/1000 live births were "near miss" for death. Near miss pregnant women were mostly due to pregnancy-induced hypertension (36%) and post-partum haemorrhage (35%). Anaemia was the most important underlying indirect cause. On arrival at the referral hospital 39% already had organ dysfunction, implying a delay in transfer and treatment in district health services.

Also in Kenya, skilled birth attendants needed to improve their awareness of and sensitivity towards cultural practices and expectations amongst pregnant women. Culturally safe care needed a collaboration between skills birth attendants, traditional birth attendants and women in order to be more woman-centred and acceptable.

Other conditions

In the emergency centre, conducting an ultrasound in people with acute abdominal pain (not trauma related) contributed to a diagnosis in 53% of cases. Point of care ultrasound could also improve diagnostic accuracy in those with undifferentiated shock, but did not effect fluid administration or vasopressor use.

Health systems and health services research

Supply of medication

During COVID-19, people with chronic conditions were likely to receive medication at home via a community health worker. This decongested facilities and protected vulnerable people. Overall 78% of parcels were delivered successfully. Challenges were with addresses and contact details on file, transport of parcels and community health workers, communicating effectively with patients, having an auditable trail for the medication and handling out-of-area patients. Adherence appeared to improve and home delivery was recommended as a useful option for alternative delivery in the future.

Workforce

Retention of medical officers in the district health services was significantly related to their overall rating of the facility. Key issues were being part of a cohesive clinical team with supportive relationships, having a family physician, developing a more collaborative

and appreciative management style, providing career pathways, enabling professional development, being flexible to needs around parenting and childcare with working hours and overtime, and keeping the workload manageable. In addition, being with your partner, having educational opportunities for children and social support were important.

During COVID-19, healthcare workers had a number of experiences. These included dealing with the unknown and uncertainty of a new infectious disease, having to constantly change and adapt while also being overburdened, dealing with their own feelings of fear, anxiety and exhaustion, and needing structured support and connection, characterised by compassion and encouragement.

Amongst African emergency medicine practitioners, 44% are accredited to perform point of care ultrasound. This is limited by lack of training opportunities, equipment and supplies. Most perform POCUS for trauma (99%), cardiac conditions (90%), thoracic conditions (90%) and only 49% for HIV and TB (FASH).

Amongst junior doctors working in the emergency centre after hours, 35% of radiographs are abnormal. The doctors were 77% accurate, with 38% sensitivity and 97% specificity. Performance was related to the anatomical area (better with appendicular skeleton), mechanism injury (better in blunt force), time of day and number of abnormalities.

Community health workers were conflicted in a rural district by their inability to support palliative and home-based care. They did identify and refer people needing palliative care. Their scope of practice and training needed to be clarified.

Midwives in Kenya are generally confident and competent in the domain of intrapartum care. They had much less confidence in general knowledge and skills. Midwives were more competent in tertiary centres compared to district level services, and midwives who were directly trained were more competent that those trained as both nurses and midwives.

Model of care

Primary mental health care in a rural district was hindered by ambivalent attitudes amongst primary care providers and over reliance on a mental health nurse, who was prone to burnout. Primary care providers needed more evidence-based training. There were resource constraints and primary mental health care was not monitored by the health information system. There was a need for better coordination and collaboration with specialist services and the availability of counselling and psychological services.

People with urgent traumatic brain injuries were delayed in seeking and reaching care by alcohol and crime related factors. In primary care and district hospitals, definitive care is delayed by a lack of imaging and delays in transfer. At the referral hospital care is limited by resources. Poor communication with patients was related to a lack of follow up and remaining in care.

Older adults requiring resuscitation at the emergency centre of a district hospital had high previous attendance (42%), multi-morbidity (44% > 3 conditions), polypharmacy and hyponatraemia (54%). Diabetes and hypertension were underlying drivers and the commonest problems were circulatory collapse and acute kidney injury.

Outreach and support from private specialists to a district hospital improved access to and timeliness of services, while also requiring additional resources and costs. These additional costs, may be mitigated by savings at higher levels and for patients. Outreach appeared to improve the capability and attitudes of staff, as well as system functionality.

In Africa, family physicians make a range of contributions to the health systems. They positively influence the capacity of the workforce, supply of equipment, health information system and use of digital technology. They strengthen the models of care, champion quality improvement, improve utilisation and availability of services, improve core functions and patient safety.

In Nairobi, a chain of private sector primary care clinics were operated by relatively young general practitioners, without postgraduate training and who lacked essential primary care skills. Services were not comprehensive and the practice population were mostly younger adults, employed and without chronic conditions. Patients had good access and were highly satisfied with services received. Overall, the clinics scored poorly for primary care performance, particularly in terms of first contact utilisation, coordination, continuity, comprehensiveness and community–orientation. Consultations were brief and biomedical. The model of care needs revision to improve primary care performance.

Core primary care functionality

Coordination: The use of the Vula App to make referrals from primary care to the referral hospital was particularly useful for non-urgent and semi-urgent patients. It streamlined the referral process, improved coordination of care through transfer of information, improved immediate quality of care through feedback and advice, and had the potential to support continuing professional development. Its use needed to be standardised and data integrated into the health information system.

Comprehensiveness: Approximately 4% of patients in the regional hospital emergency centre need palliative care, mostly for cancer, HIV and neurological conditions. They attend for symptoms, social needs (caregiver exhaustion), and primary care (obtain medication or simple procedures such as a change of urinary catheter). There is a need to develop palliative and home-based care services.

Effectiveness

Patients experiencing prolonged care in the emergency centre were in a more critical condition, received more interventions, had increased mortality, longer hospitalisation and more organ failure.

Efficiency

Emergency medicine providers in a district hospital saw 0.7 patients per hour on average. This was decreased as the shift progressed and by the number of patients 'boarding' in the emergency centre, but was increased by the number of patients waiting. It was also related to the type of shift, number of cumulative shifts and type of clinician.

Educational research

The supervision of family medicine registrars was evaluated at one university in South Africa. Feedback from supervisors was generally rated as poor (63%). Learning plans needed to take note of prior knowledge and outline specific action plans to improve performance. Resources were a limiting factor, such as the number of family physicians, available equipment, infrastructure and funding. The clinical competence of family physicians varied and they needed more support to develop educational skills. The quality of supervision varied, and was context and supervisor dependent.

Having medical students in a primary care facility was generally perceived to add value. They helped create a culture of learning for all staff, improved the experience of care for patients, and promoted continuous professional development. Increasing numbers of students and limited space were challenges.

Basic research

Community members thought that delayed consent in an emergency situation was acceptable if there were clear immediate or future benefits.

Research outputs in emergency medicine are not well aligned with the actual research priorities set by the discipline.

Clinical **research**

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Implementing active surveillance for tuberculosis: The experiences of healthcare workers at four sites in two provinces in South Africa

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Background

The high burden of tuberculosis (TB) in South Africa (SA) is associated with uncontrolled transmission in communities and delayed diagnosis of active cases. Active surveillance for TB is provided by community-based services (CBS). Research is required to understand key factors influencing TB screening services in the CBS. This study explored the implementation of active surveillance for TB where community-oriented primary care (COPC) had been successfully implemented to identify these factors.

Methods

This was a qualitative study of four established COPC sites across two provinces in SA where active surveillance for TB is implemented. Semi-structured interviews were conducted with purposively selected healthcare workers in the CBS and citizens in these communities. The recorded interviews were transcribed for data analysis using ATLAS.ti software.

Results

The factors influencing active surveillance for TB were directly related to the major players in the delivery of CBS. These factors interacted in a complex network influencing implementation of active surveillance for TB. Building effective relationships across stakeholder platforms by community health workers (CHWs) was directly influenced by the training, capacity building afforded these CHWs by the district health services; and acceptability of CBS. Each factor interplayed with others to influence active surveillance for TB.

Conclusion

Community health workers were central to the success of active surveillance for TB. The complex interactions of the social determinants of health and TB transmission in communities required CHWs to develop trusting relationships that responded to these issues that have impact on TB disease and linked clients to healthcare.

Citation

South African Family Practice Journal https://doi.org/10.4102/safp.v64i1.5514

A multi-parameter diagnostic clinical decision tree for the rapid diagnosis of tuberculosis in HIV-positive patients presenting to an emergency centre

Daniël Jacobus van Hoving, Graeme Meintjes, Gary Maartens, Andre Pascal Kengne

Background

Early diagnosis is essential to reduce the morbidity and mortality of HIV-associated tuberculosis. We developed a multiparameter clinical decision tree to facilitate rapid diagnosis of tuberculosis using point-of-care diagnostic tests in HIV-positive patients presenting to an emergency centre.

Methods

A cross-sectional study was performed in a district hospital emergency centre in a high-HIV-prevalence community in South Africa. Consecutive HIV-positive adults with ≥1 WHO tuberculosis symptoms were enrolled over a 16-month period. Point-of-care ultrasound (PoCUS) and urine lateral flow lipoarabinomannan (LFLAM) assay were done according to standardized protocols. Participants also received a chest X-ray. Reference standard was the detection of Mycobacterium tuberculosis using Xpert MTB/RIF or culture. Logistic regressions models were used to investigate the independent association between prevalent microbiologically confirmed tuberculosis and clinical and biological variables of interest. A decision tree model to predict tuberculosis was developed using the classification and regression tree algorithm.

Results

There were 414 participants enrolled: 171 male, median age 36 years, median CD4 cell count 86 cells/mm3. Tuberculosis prevalence was 42% (n=172). Significant variables used to build the classification tree included ≥2 WHO symptoms, antiretroviral therapy use, LF-LAM, PoCUS independent features (pericardial effusion, ascites, intra-abdominal lymphadenopathy) and chest X-ray. LF-LAM was positioned after WHO symptoms (75% true positive rate, representing 17% of study population). Chest X-ray should be performed next if LFLAM is negative. The presence of ≤1 PoCUS independent feature in those with 'possible or unlikely tuberculosis' on chest x-ray represented 47% of non-tuberculosis participants (true negative rate 83%). In a prediction tree which only included true point-of-care tests, a negative LF-LAM and the presence of ≤2 independent PoCUS features had a 71% true negative rate (representing 53% of sample).

Conclusions

LF-LAM should be performed in all adults with suspected HIV-associated tuberculosis (regardless of CD4 cell count) presenting to the emergency centre.

Citation

Welcome Open Research 2022, 5:72 https://doi.org/10.12688/wellcomeopenres.15824.2

Evaluation of factors associated with medical male circumcision in South Africa: A case-control study

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Background

The World Health Organization recommends medical male circumcision (MMC) to prevent human immunodeficiency virus (HIV). More research is needed in South Africa on factors influencing the uptake of MMC.

Aim

To evaluate factors associated with uptake of MMC.

Setting

Diepsloot, Johannesburg, South Africa.

Methods

An observational case-control study. Cases (men attending a private general practice (GP) offering free MMC) were compared to controls (uncircumcised men attending a local shopping mall) for a variety of demographic, sociocultural and financial factors. Factors were analysed using bivariate and multiple-variable binary forward logistic regression with the Statistical Package for Social Sciences.

Results

There were 350 cases and 350 controls. Four factors were associated with the uptake of MMC: being a student (adjusted odds ratio [AOR]: 6.29, 95% confidence interval [CI]: 2.29–17.26), attending a mainline Christian denomination (AOR 2.85, 95% CI: 1.39–5.78), speaking an African language other than Zulu (range of AORs: 2.5–6.8, $p < 0.05$) and being South African (AOR: 2.50, 95% CI: 1.58–3.96). MMC was associated with feeling susceptible to HIV, seeing it as a serious health problem and being encouraged by partners. Men who were sterilised, not sexually active and without symptoms of a sexually transmitted infection felt less susceptible. Other barriers included the pain of the procedure, indirect costs, anticipated impact on sexual activity, lack of information, cultural beliefs, embarrassment and access to health services.

Conclusion

Disease prevention initiatives should take note of the factors associated with MMC in this community. Further qualitative studies should explore issues behind the factors identified and provide further insights.

Contribution

This study helps to identify factors that health services should address when implementing medical male circumcision

Citation

African Journal of Primary Health Care & Family Medicine https://doi.org/10.4102/phcfm.v14i1.3500

COVID-19 and hyperglycaemic emergencies: Perspectives from a developing country

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Background

Pre-existing diabetes mellitus (DM), hyperglycaemia and obesity emerged as prognostic factors in severe Coronavirus disease 2019 (COVID-19). To date, no published South African studies report on the incidence, presentation and outcomes of DM and diabetic ketoacidosis (DKA) during the COVID-19 pandemic.

Objective

To reflect on the diagnosis, management, obstacles to care and outcome of four patients who were admitted to Tygerberg Hospital, Cape Town, South Africa. The outcome of these cases that presented consecutively with DKA and COVID-19 between May and July 2020 are discussed, the presentation, management and long-term considerations with specific reference to DKA and COVID-19 are reviewed.

Results

Three of the four patients had newly diagnosed DM. These patients presented with non-specific symptoms and signs leading to a diagnosis of both DKA and COVID-19. The single surviving patient in this series was known to have pre-existing DM but discontinued his insulin upon becoming unwell. One patient required insulin therapy at the time of initial presentation a week or two prior to the current admission but received metformin instead. She was diagnosed with COVID-19 after having poor glycaemic control for over one week, after which insulin was initiated. Ultimately she died as a result of severe hypokalaemia. One patient primarily had respiratory complaints, severe COVID-19 pneumonia and received concomitant dexamethasone. Glycaemic control in this patient was complicated by both hypo- and hyperglycaemia.

Conclusion

These cases highlight the management challenges faced by many developing countries, and identify the missed opportunities in persons presenting with COVID-19 and hyperglycaemic emergencies.

Citation

Journal of Endocrinology, Metabolism and Diabetes of South Africa https://doi.org/10.1080/16089677.2021.1939934

Clinical characteristics associated with mortality of COVID19 patients admitted to an intensive care unit of a tertiary hospital in South Africa

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Background

Over 130 million people have been diagnosed with Coronavirus disease 2019 (COVID-19), and more than one million fatalities have been reported worldwide. South Africa is unique in having a quadruple disease burden of type 2 diabetes, hypertension, human immunodeficiency virus (HIV) and tuberculosis, making COVID-19-related mortality of particular interest in the country. The aim of this study was to investigate the clinical characteristics and associated mortality of COVID-19 patients admitted to an intensive care unit (ICU) in a South African setting.

Methods

We performed a prospective observational study of patients with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection admitted to the ICU of a South African tertiary hospital in Cape Town. The mortality and discharge rates were the primary outcomes.

Results

Of the 402 patients admitted to the ICU, 250 (62%) died, and another 12 (3%) died in the hospital after being discharged from the ICU. The median age of the study population was 54.1 years (IQR: 46.0–61.6). The mortality rate among those who were intubated was significantly higher at 201/221 (91%). After adjusting for confounding, multivariable robust Poisson regression analysis revealed that age more than 48 years, requiring invasive mechanical ventilation, HIV status, procalcitonin (PCT), Troponin T, Aspartate Aminotransferase (AST), and a low pH on admission all significantly predicted mortality. Three main risk factors predictive of mortality were identified in the analysis using Cox regression Cox proportional hazards regression model. HIV positive status, myalgia, and intubated in the ICU were identified as independent prognostic factors.

Conclusions

In this study, the mortality rate in COVID-19 patients admitted to the ICU was high. Older age, the need for invasive mechanical ventilation, HIV status, and metabolic acidosis were found to be significant predictors of mortality in patients admitted to the ICU.

Citation

PLoS ONE 17(12): e0279565. https://doi.org/10.1371/journal.pone.0279565

The diagnostic utility of abdominal ultrasound in adult patients presenting with non-traumatic abdominal pain to the emergency centre of Khayelitsha Hospital (MMed Research Assignment)

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Introduction

Patients with non-trauma related acute abdominal pain often presents to emergency centres. Ultrasound is frequently used to augment the clinical diagnosis but is still a scarce imaging modality in resource-limited settings. The aim of the study was to evaluate the utility of abdominal ultrasound in diagnosing adult patients with non-trauma related abdominal pain presenting to the emergency centre of an entry-level hospital in Cape Town. A secondary objective was to determine the agreement between the initial clinical impression, sonographic diagnosis, and the final discharge diagnosis.

Methods

A retrospective chart review was conducted of adults (≥18-years) with acute nontrauma related abdominal pain and required an abdominal ultrasound ordered by emergency centre staff for a 6-month period (01 January 2019 – 30 June 2019). All ultrasound studies which assess the abdomen or part thereof were included. Patients with no ultrasound performed, obstetric-only ultrasounds, missing ultrasound report, or missing clinical records were excluded from analysis. Summary statistics were used to describe all variables.

Results

A total of 88 patients were analysed of which 64 (72.7%) had an abnormal abdominal ultrasound examination. An urgent ultrasound diagnosis was identified in 34 (53.1%) patients. The median age was 36 years, predominantly female (70.5%), and most patients (85.1%) were triaged as routine or urgent. The predominant associated symptom reported was nausea and vomiting (20.5%). Most abnormal ultrasounds (28.1%) fell within the general surgical category. Fair agreement (κ=0.3) occurred between the ultrasound indication and the ultrasound diagnosis.

Conclusion

Abdominal ultrasounds ordered by emergency centre staff were frequently abnormal and aided in the identification of an urgent diagnosis in half of these patients. It highlights the undocumented burden of non-trauma related abdominal pain in this low-to middle-income resource setting although no independent predictors of sonographic pathology were identifiable.

Diabetes in the Western Cape, South Africa: A secondary analysis of the diabetes cascade database 2015 – 2020

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Aim

The aim was to describe the demographics, comorbidities and outcomes of care for patients with diabetes at primary care facilities in the Western Cape, South Africa, between 2015 and 2020.

Methods

This was a secondary analysis of the diabetes cascade database.

Results

The database included 116726 patients with mean age of 61.4 years and 63.8 % were female. The mean age at death was 66.0 years. Co-morbidities included hypertension (69.5 %), mental health disorders (16.2 %), HIV (6.4 %) and previous TB (8.2 %). Sixty-three percent had at least one previous hospital admission and 20.2 % of all admissions were attributed to cardiovascular diseases. Coronavirus was the third highest reason for admission over a 10-year period. Up to 70% were not receiving an annual HbA1c test. The mean value for the last HBA1c taken was 9.0%. Three-quarters (75.5 %) of patients had poor glycaemic control (HbA1c >7 %) and a third (33.7 %) were very poorly controlled (HbA1c>10 %). Glycaemic control was significantly different between urban sub-districts and rural areas. Renal disease was prevalent in 25.5 %.

Conclusion

Diabetes was poorly controlled with high morbidity and mortality. There was poor compliance with guidelines for HbA1c and eGFR measurement. At least 7% of diabetic patients were being admitted for complications annually.

Citation

Primary Care Diabetes https://doi.org/10.1016/j.pcd.2022.05.011

Evaluating the Implementation of the GREAT4Diabetes WhatsApp Chatbot to Educate People With Type 2 Diabetes During the COVID-19 Pandemic: Convergent Mixed Methods Study

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Background

In South Africa, diabetes is a leading cause of morbidity and mortality, which was exacerbated during the COVID-19 pandemic. Most education and counseling activities were stopped during the lockdown, and the GREAT4Diabetes WhatsApp Chatbot was innovated to fill this gap. This study aimed to evaluate the implementation of the chatbot in Cape Town, South Africa, between May and October 2021.

Methods

Convergent mixed methods were used to evaluate the implementation outcomes: acceptability, adoption, appropriateness, feasibility, fidelity, cost, coverage, effects, and sustainability.

Results

The chatbot was adopted by the Metro Health Services to assist people with diabetes who had restricted health care during the lockdown and were at a higher risk of hospitalization and death from COVID-19 infection. The chatbot was disseminated via health care workers in primary care facilities and local nonprofit organizations and via local media and television. Two technical glitches interrupted the dissemination but did not substantially affect user behavior. Minor changes were made to the chatbot to improve its utility. Many patients had access to smartphones and were able to use the chatbot via WhatsApp. Overall, 8158 people connected with the chatbot and 4577 (56.1%) proceeded to listen to the messages, with 12.56% (575/4577) of them listening to all 16 messages, mostly within 32 days. The incremental setup costs were ZAR 255,000 (US $16,876) and operational costs over 6 months were ZAR 462,473 (US $30,607). More than 90% of the users who listened to each message found them useful. Of the 533 who completed the whole program, 351 (71.1%) said they changed their self-management a lot and 87.6% (369/421) were more confident. Most users changed their lifestyles in terms of diet (315/414, 76.1%) and physical activity (222/414, 53.6%). Health care workers also saw benefits to patients and recommended that the service continues. Sustainability of the chatbot will depend on the future policy of the provincial Department of Health toward mobile health and the willingness to contract with Aviro Health. There is the potential to go to scale and include other languages and chronic conditions.

Conclusions

The chatbot shows great potential to complement traditional health care approaches for people with diabetes and assist with more comprehensive patient education. Further research is needed to fully explore the patient's experience of the chatbot and evaluate its effectiveness in our context.

Citation

JMIR Diabetes http://dx.doi.org/10.2196/37882

Exploration of factors influencing insulin initiation in patients with Type 2 Diabetes Mellitus in primary care facilities in the Eastern sub-district, Cape Town (MMed research assignment)

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Background

Type 2 diabetes mellitus (T2DM) is the fourth commonest diagnosis in primary care, the leading cause of mortality among women and second cause overall in South Africa. Insulin is efficacious in management of T2DM, but there is often resistance to starting insulin from healthcare workers and patients. More needs to be known about the reasons for this.

Aim

To explore factors that influence the initiation of insulin in patients with T2DM in primary care facilities.

Setting

Four primary care facilities in the Eastern sub-district, Cape Town, South Africa

Methods

A qualitative, explorative, descriptive research with semi-structured interviews. Maximum variation sampling was used to select facilities. Random purposive sampling was used to select patients on insulin and in need of insulin at each facility. The senior medical officer and nurse practitioner in charge of chronic care were also selected. Data collected was thematically analysed using Atlas-ti software.

Results

Seventeen interviews were conducted. The main findings were high levels of congestion at primary care facilities resulting in time constraints in terms of appropriately counselling patients initiated on insulin. There were guidelines which stated clinical indicators for initiating insulin but no information on when to start counselling patients or the content of counselling on initiation of insulin. There was scarcity of resources in terms of educational material about insulin initiation, shortage of measuring strips and not enough human resources to demonstrate the process of self-injection to patients. There were concerns raised by patients about fear of self-injection, storage of insulin and the impact of being on insulin on their lifestyles.

Conclusions

One of the biggest challenges faced by clinicians in initiating insulin at primary care facilities is lack of time to adequately counsel patients on insulin initiation. This could be mitigated by introducing group counselling sessions for patients initiated on insulin and incorporating technological solutions such as a WhatsApp chatbot or telemedicine as part of the process.

Non-communicable disease care and management in two sites of the Cape Town Metro during the first wave of COVID-19: A rapid appraisal

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Background

Non-communicable diseases (NCDs), including type-2 diabetes and hypertension, have been associated with increased morbidity and mortality rates because of coronavirus disease 2019 (COVID-19). Maintaining quality care for these conditions is important but data on the impact of COVID-19 on NCD care in South Africa are sparse.

Aim

This study aimed to assess the impact of COVID-19 on facility and community-based NCD care and management during the first COVID-19 wave. Setting: Two public health sector primary care sites in the Cape Town Metro, including a Community Orientated Primary Care (COPC) learning site.

Methods

A rapid appraisal with convergent mixed-methods design, including semi-structured interviews with facility and community health workers (CHWs) (n = 20) and patients living with NCDs (n = 8), was used. Interviews were conducted in English and Afrikaans by qualified interviewers. Transcripts were analysed by thematic content analysis. Quantitative data of health facility attendance, chronic dispensing unit (CDU) prescriptions and routine diabetes control were sourced from the Provincial Health Data Centre and analysed descriptively.

Results

Qualitative analysis revealed three themes: disruption (cancellation of services, fear of infection, stress and anxiety), service reorganisation (communication, home delivery of medication, CHW scope of work, risk stratification and change management) and outcomes (workload and morale, stigma, appreciation and impact on NCD control). There was a drop in primary care attendance and an increase in CDU prescriptions and uncontrolled diabetes.

Conclusion

This study described the service disruption together with rapid reorganisation and change management at primary care level during the first COVID-19 wave. The changes were strengthened by the COPC foundation in one of the study sites. The impact of COVID-19 on primary-level NCD care and management requires more investigation.

Citation

PHCFM doi: 10.4102/phcfm.v14i1.3215

The experiences of health care received by women presenting with spontaneous abortions to the emergency department at Helderberg Hospital, Western Cape (MMed research assignment)

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Introduction

Spontaneous abortions are common, affecting nearly 12.5% of all pregnancies globally, and have a significant impact on the wellbeing of women. Dissatisfaction with health services is well documented. Although clinical guidelines are available to guide the management of spontaneous abortions, emergency departments often fail to provide the necessary support for these women to receive holistic care. Person-centred care has been shown to effectively address patients' expectations, improve their overall health care experience and well-being.

Aim

The aim was to explore the experiences of health care received by women presenting with spontaneous abortions to the emergency department at Helderberg Hospital, Western Cape.

Methods

A descriptive phenomenological qualitative study was conducted using criterion-based purposive sampling to identify suitable participants. Data were collected through semi-structured individual interviews. Atlas-ti (version 22) software assisted with data analysis using the framework method.

Results

A total of nine participants were interviewed. We identified four main themes, namely issues with the physical environment, staff attitudes and behaviour, the effect of time, and sharing of information, which directly impacted on the patients' experience of the health care received.

Conclusion

This study highlighted the need for a more person-centred approach to positively influence the patient's health care experience in the management of spontaneous abortions in the emergency department. Managers should focus on changes to organisational culture that supports person-centredness in the emergency centre through training and clinical governance activities. Attention should be paid to the physical environment, availability of patient information materials and sequential coordination with primary care services.

The experiences of nurses and female clients regarding family planning services in a rural subdistrict in the Western Cape (MMed research assignment)

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Background

Family planning (FP) is a key component of primary health care (PHC). Nurses are the first source of FP information to women outside their social context. There is a paucity of research regarding clients' lived experiences of FP, particularly understanding both the client's and the healthcare worker's experiences in the same clinical context and community.

Aim

This study aims to explore the lived experiences of nurses and female clients regarding FP services at PHC clinics. Setting: Two PHC clinics in a rural sub-district in South Africa.

Methods

A descriptive qualitative study using semi-structured interviews was conducted. Clients and nurses were selected using criterion-based purposive sampling and interviewed by female research assistants in a home language in a private setting. Transcription and translation of audio recordings were done. Data were analysed inductively using the framework method.

Results

Ten clients and eight nurses were interviewed, with an equal number from each clinic. The median age of clients was 28.5 years and of nurses was 47.5 years. Four themes emerged: (1) Stigma, culture and the teenage girl; (2) Bad effects – the Big Five, clustered around weight changes, blood blockages and abnormal bleeding, pain, fertility and cancer; (3) FP social dynamics; and (4) FP and the health system.

Conclusion

Family planning is highly moralised and stigmatised. Negative effects of FP were not adequately recognised by the health system. Family planning outreach into the community and dedicated FP resources at clinics were suggestions to improve the service.

Prevalence of anaemia in pregnancy in Vhembe district, South Africa (MPhil research assignment)

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Background

Anaemia in pregnancy is an indicator of poor nutrition and is associated with worse pregnancy outcomes. The World Health Organization (WHO) has set a target of 50% reduction in prevalence of anaemia by 2025. South Africa aims to achieve a haemoglobin of >10g/dl for 80% of women at delivery by the year 2023. This study aimed to assess its prevalence of anaemia in pregnancy and associated factors in Vhembe district.

Methods

A descriptive cross-sectional survey of women attending antenatal care in April-June 2021. A sample of 419 pregnant women was obtained and data collected from the maternity case records as well as a brief medication questionnaire.

Results

The prevalence of anaemia in pregnancy in Vhembe district was 32.2%. Of those with anaemia, 58.7% were mild, 38.4% were moderate and 2.9% were severe. Adherence to prescribed oral supplements was 96.5% for iron and 97.3% for folic acid. Reported stock out for iron and folic acid supplements was 27.2% and 30.5% respectively. The mean age of the sample was 26.7 years (SD6.2) while the median gestational age was 30 weeks (IQR 21 to 38). The median gestational age at booking was 16 weeks (IQR 10 to 21) and median parity was 1 child (IQR 0 to 2). Majority of pregnant women with anaemia had food insecurity.

Conclusion

The Vhembe district prevalence of anaemia in pregnancy is a moderate public health problem. Food insecurity appears to be the main factor associated with anaemia in pregnancy in Vhembe district.

Determinants of Obstetric Near Miss in a Tertiary Hospital in Kenya: A Retrospective Study

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Background

Kenya has a high burden of facility maternal deaths but there is scarce utilization of the near miss approach to understand facility related determinants of maternal mortality. The aim of this study was to investigate determinants of near miss in a major refferal hospital in Kenya using the World Health Organization near miss approach.

Methods

A retrospective study design was used in a referral hospital in Kenya. Prevalence, direct and indirect causes of near miss were determined. Binomial logistic regression was used to determine associations between maternal characteristics and maternal near miss.

Results

Maternal near miss ratio was 8.7 per 1000 live births. The most prevalent direct factors were: Severe post-partum hemorrhage (35%), eclampsia (18.9%) severe pre-eclampsia (17.4%), blood transfusion (79%), and hepatic dysfunction (3.7%). Anemia, previous ceaserean section and prolonged/obstructed labor were the most important contributory factors. The prevalence of organ dysfunction at admission was 39%. Only 74% of eclampsia cases had received magnesium sulphate on referral. Higher gestation at delivery (AOR = 0.640, 95% C.I =0.477–0.858) and those who received antenatal care from a level two or three facility (AOR = 0.190, 95% CI = 0.042–0.856) were less likely to experience a near miss.

Conclusion

Obstetric hemorrhage and pregnancy induced hypertension were the most important direct determinants of near miss, while anemia was the most important indirect determinant. Organ dysfunction on admission to the tertiary referral facility was high, suggesting delays in interventions at lower level facilities. Interventions addressing obstetric hemorrhage, pregnancy induced hypertension and pre-natal anemia may reduce the burden of near miss and mortality.

Citation

International Journal of Childbirth DOI: 10.1891/IJC-2021-0050

Exploring experiences with sensitivity to cultural practices among birth attendants in Kenya: A phenomenological study

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Background

Sensitivity to women's cultural needs and expectations by care providers is essential. Skilled birth services for women are as essential as traditional birth services. Therefore, collaborative skilled and cultural care optimises childbearing experiences.

Aim

This study explored the experiences of birth attendants (BAs) with sensitivity to cultural practices (CPs) during pregnancy and birth among the Keiyo community in Kenya. Setting: The study was conducted in the purposively selected public health centres and dispensaries offering maternity services and the villages in Keiyo South Sub County in Kenya.

Methods

A qualitative interpretive phenomenological study of BAs was conducted. Iterative and inductive interviews using a semistructured guide were conducted with 11 skilled BAs (SBAs) and eight traditional BAs (TBAs). Audio-recorded interviews were transcribed and analysed using ATLAS.ti software version 8.4.4 (1135), following Van Manen's five thematic analysis steps.

Results

Three themes emerged: birth attendants' cultural encounters, response to cultural encounters and collaboration. Birth attendants' responses to different cultural encounters revealed their awareness of CPs. The response was experienced as a sensitivity to the need for a triad (woman, TBAs and SBAs) collaborative care, enabling collaborative, woman-centred and culturally safe care.

Conclusion

Birth attendants are exposed to cultural encounters, and their responses determine their awareness of enabling sensitive care for optimal childbearing experiences. The study illuminated the need for further collaborative engagements between the BAs and the community to facilitate positive experiences by women through woman-centred, culturally safe care.

Citation

African Journal of Primary Health Care & Family Medicine https://doi.org/10.4102/phcfm.v14i1.3322

Awareness of cultural practices by skilled birth attendants during pregnancy and birth in Kenya: An interpretive phenomenological study

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Background

Cultural capacity among SBAs is recommended in maternal care to promote culturally safe care and meet the childbearing women's cultural needs and expectations. This study aimed to explore awareness of cultural practices by skilled birth during pregnancy and birth within the Keiyo community in Kenya.

Methods

A qualitative phenomenological study was conducted between August to December 2019. A semistructured interview guide was piloted with two SBAs. Individual interviews and data analysis were conducted iteratively. Eleven participants were interviewed, and saturation of themes was achieved after the ninth SBA. Audio recorded data were transcribed and analysed using ATLAS.ti Software version 8.4.4 (1135) that followed Van Manen's five steps of thematic analysis.

Findings

The three themes that emerged from an inductive and iterative data analysis process were SBAs familiarity with cultural practices, SBAs awareness of cultural practices, women's expectations of clinical care and challenges to establishing a more collaborative relationship between SBAs, traditional birth attendants (TBAs) and childbearing women.

Conclusion

The SBAs awareness of cultural practices was highlighted through relationships formed during care engagements. This awareness revealed a potential indicator for women's choice of caregiver. Awareness of threats to cultural safety and fear of disclosure potentially created mechanisms to promote more collaborative care. A broader scope of skilled care approaches requires heightening maternity care providers' cultural sensitisation to reduce gaps in women's cultural needs and expectations.

Citation

International Journal of Africa Nursing Sciences https://doi.org/10.1016/j.ijans.2022.100394

To explore psychosocial factors as well as to determine the referral system factors influencing attendance at colposcopy appointments (MMed research assignment)

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Background

Cervical cancer is ranked the fourth highest in women worldwide and contributed to the second highest cancer related deaths among South African females during 2018. Early identification of precancerous cervical lesions can improve patient prognosis and lessen the financial burden in resource constraint settings.

Aim

To obtain an in depth understanding of the experience of patients and health care workers with colposcopy appointment attendance in the Metro East District, Western Cape, South Africa.

Setting

The study was conducted at Mfuleni Community Day Centre (CDC) and Khayelitsha District Hospital (KDH). Mfuleni and Khayelitsha are densely populated communities of mixed race where inhabitants predominantly speak isiXhosa. The unemployment rate is high and many live in informal dwellings.

Methods

An explorative qualitative research study was conducted using semi- structured individual interviews. Individuals were selected through the process of purposeful sampling. Data was analyzed using the framework method of qualitative data analysis.

Results

The five themes which emerged from this research study include: patient- centredness, social influencers, safety netting, access to facilities and administrative factors. A patient-centred approach helped health care workers (HCWs) identify coveted health care needs and outcomes whilst considering unavoidable personal factors that impact on shared decision making. Although male partner interest was lacking, other forms of social support motivated attendance. Tracing 4 patients was difficult however opportunistic health promotion assisted with the detection of patients who were lost to follow up. Decentralized services made colposcopies accessible, yet administrative inefficiency led to distrust in the health care system.

Conclusion

Factors that influenced patients and HCWs experience with colposcopy appointment attendance were multi factorial. The conceptual framework provided, illustrates factors that influence colposcopy appointment attendance. These include patient centredness, social influencers, safety netting, access to facilities and administrative factors.

A Systemic Review on the Diagnostic Accuracy of Point-of-Care Ultrasound in Patients With Undifferentiated Shock in the Emergency Department

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Introduction

Early identification of the shock type and correct diagnosis is associated with better outcomes. Previous studies have suggested that point-of-care ultrasound (POCUS) increases the diagnostic accuracy of patients in undifferentiated shock. However, a complete overview of the diagnostic accuracy of POCUS and the related treatment changes when compared to standard care is still limited. Our objective was to compare POCUS against standard practice regarding the diagnostic accuracy and specific therapeutic management changes (fluid volume administration and vasopressor use) in patients with undifferentiated shock in the emergency department (ED).

Methods

We conducted a systematic review in concordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses. A systematic search was performed using Embase, PubMed, Cochrane Central Register for Controlled Trials, and clinicaltrials.gov. Two physicians independently selected the articles and assessed the quality of the studies independently with the Quadas-2 tool. All included studies used POCUS in adult patients in undifferentiated shock and described diagnostic accuracy or specific therapeutic management changes and compared this to standard care. The primary outcome was diagnostic accuracy. Secondary outcomes were the amount of fluid administered and vasopressor use in the ED. Only articles published after 1996 were included.

Results

There were 10,805 articles found of which 6 articles were included. Four out of six studies reported diagnostic accuracy, three reported on fluid administration and vasopressors. We found that the diagnostic accuracy improved through the use of POCUS when compared to the standard care group, increasing overall diagnostic accuracy from 45-60% to 80-89% when combined with clinical information. There was no significant difference in fluid administration or vasopressor use between the groups.

Conclusion

In our systematic review, we found that the use of POCUS in patients that presented with undifferentiated shock in the ED improved the diagnostic accuracy of the shock type and final diagnosis. POCUS resulted in no changes in fluid administration or vasopressor use when compared to standard care. However, the results should be interpreted within the limitations of some of the studies that were included in the review.

Citation

Cureus 14(3): e23188. DOI 10.7759/cureus.23188

Health systems and **health services research**

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Evaluating the implementation of home delivery of medication by community health workers during the COVID-19 pandemic in Cape Town, South Africa: A convergent mixed methods study

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Background

Primary care services in South Africa have been challenged by increasing numbers of people with communicable and non-communicable chronic diseases. There was a need to develop alternative approaches for stable patients to access medication. With the onset of the coronavirus pandemic there was an urgent need to decongest facilities and protect people from infection. In this crisis the Metro Health Services rapidly implemented home delivery of medication by community health workers. This study aimed to evaluate the implementation of home delivery of medication by community health workers during the coronavirus pandemic in Cape Town, South Africa.

Methods

A convergent mixed methods study evaluated six implementation outcomes: adoption, feasibility, fidelity, coverage, cost, and sustainability of the initiative. Data sources included routinely collected data, a telephonic survey of 138 patients, an analysis of set-up and recurrent costs as well as 17 descriptive exploratory qualitative semi-structured interviews with 68 key informants.

Results

Over a 6-month period 1,054,657 pre-packaged parcels were sent to primary care facilities, 819,649 (77.7%) were delivered and of those 97,297 (11.9%) returned. The additional costs were estimated as 1.3% of a total health budget of R2,2 billion. The initiative was rapidly adopted as it decongested facilities and protected vulnerable patients. Although it was feasible to implement at scale, numerous challenges were encountered, such as incorrect addresses and contact details, transporting parcels, communicating with patients, having a reliable audit trail, and handling out-of-area patients. All role players thought the service should continue and 42.3% of patients reported better adherence to their medication.

Conclusion

Home delivery of medication by community health workers is feasible at scale and affordable. It should continue, but as one of a menu of options for alternative delivery of medication. The following need to be improved: efficiency of the system, the audit trail, adequate support and resources for community health workers, transport of medication, communication with patients, empanelment of patients, governance of the system and training of the community health workers.

Citation

BMC Health Services Research https://doi.org/10.1186/s12913-022-07464-x

Health care workers' perspectives on factors influencing the optimization of primary mental health care in the Oudtshoorn sub-district, Western Cape

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Background

Untreated mental disorders negatively impact families, social life, income and financial obligations, employability, productivity, and have a high incidence of co-morbidity with other illnesses. While integration of primary mental healthcare (PMHC) into primary healthcare (PHC) is a priority, many interventions are perceived as poorly planned, not evidence-based and not sustainable. In South Africa, 52% of the population live in rural areas. There is limited literature on rural mental healthcare in South Africa, and even less on integrating PMHC into PHC.

Aim

To explore health care workers' perspectives on factors influencing the optimisation of PMHC in the Oudtshoorn sub-district, Western Cape.

Setting

The study was conducted between March and July 2021 in the Oudtshoorn sub-district, Garden Route District, Western Cape.

Methods

This was descriptive exploratory qualitative research. Purposive sampling was used. Fourteen key informant interviews were conducted. The voice recordings were transcribed verbatim and analysed thematically.

Results

Four themes emerged: 1. Ambivalent attitudes to PMHC, 2. Barriers to PMHC, 3. Availability of and access to mental health support staff and 4. Targeted interventions to improve PMHC. The need for evidence-based training methods, reliance on the advanced mental healthcare professional nurses, resource- and funding constraints, the need to improve healthcare worker-specialist collaboration and lack of quality information systems that measured PMHC services were subthemes. Providing psycho-education and counselling services were difficult due to a lack of trained state sector counsellors and psychologists.

Conclusion

Primary mental healthcare funding was inadequate, mental healthcare practitioners were vulnerable to burn-out in this resource-constraint environment, training non-specialists needed to be evidence-based in PHC settings and the need for counselling and psychology services was evident. Mental health programmes needed to be more effective and locally relevant to rural areas.

Retention of medical officers in the district health services of the Western Cape, South Africa: An exploratory descriptive qualitative study

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Background

An adequate health workforce is an essential building block of effective health systems. In South Africa, medical officers (MOs) are a key component of service delivery in district health services. The Stellenbosch University Family Physician Research Network in the Western Cape identified that retention of MOs was a key issue. The aim of this study was to explore the factors that influence the retention of MOs in public sector district health services in the Western Cape, South Africa.

Methods

This is a descriptive exploratory qualitative study. Medical officers were purposefully selected in terms of districts, facility types, gender, seniority and perceived likelihood of leaving in the next four years. Semi-structured interviews were performed by family physicians, and the qualitative data were analysed using the framework method.

Results

Fourteen MOs were interviewed, and four major themes were identified: career intentions; experience of clinical work; experience of the organisation; and personal, family and community issues. Key issues that influenced retention were: ensure that the foundational elements are in place (e.g. adequate salary and good infrastructure), nurture cohesive team dynamics and relationships, have a family physician, continue the shift towards more collaborative and appreciative management styles, create stronger career pathways and opportunities for professional development in the district health services, be open to flexible working hours and overtime, and ensure workload is manageable.

Conclusion

A number of important factors influencing retention were identified. Leaders and managers of the healthcare services could intervene across these multiple factors to enhance the conditions needed to retain MOs

Citation

South African Family Practice Journal https://doi.org/10.4102/safp.v64i1.5467

Retention of medical officers in district health services, South Africa: A descriptive survey

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Background

The health workforce is critical to strengthening district health services (DHS). In the public sector of South Africa, medical officers (MOs) are essential to delivering services in primary health care (PHC) and district hospitals. Family physicians, responsible for clinical governance, identified their retention as a key issue.

Aim

To evaluate factors that influence retention of MOs in public sector DHS. Design & setting: A descriptive survey of MOs working in DHS, Western Cape, South Africa.

Method

All 125 MOs working in facilities associated with the Stellenbosch University Family Physician Research Network (SUFPREN) were included in the survey. A questionnaire measured the prevalence of key factors that might be associated with retention (staying >4 years) and included the Satisfaction of Employees in Health Care (SEHC) tool and Short Warwick–Edinburgh Mental Wellbeing Scale (SWEMWBS). Data were collected in Research Electronic Data Capture (REDCap) and analysed in the Statistical Package for Social Sciences (SPSS).

Results

Ninety-five MOs completed the survey. The overall rating of the facility (P = 0.001), age (P = 0.004), seniority (P = 0.015), career plans (P<0.001) and intention to stay in the public sector (P<0.001) were associated with retention. More personal factors such as social support (P = 0.007), educational opportunities for children (P = 0.002), and staying with one's partner (P = 0.036) were also associated with retention. Sex, rural versus urban location, district hospital versus primary care facility, overtime, remuneration, and additional rural allowance were not associated with retention.

Conclusion

The overall rating of the facility was important and subsequent qualitative work has explored the underlying issues. These findings can guide strategies in the Western Cape and similar settings to retain MOs in the DHS.

Citation

British Journal of General Practice Open https://doi.org/10.3399/BJGPO.2022.0047

Use of the Vula App to refer patients in the West Coast District: A descriptive exploratory qualitative study

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Background

Referral systems play a pivotal role in coordination and quality of care and should be evaluated for their utility. The Vula App is used by various disciplines and hospitals in South Africa to refer patients. The aim was to explore the perceptions of medical practitioners regarding the use of the Vula App in the West Coast District.

Methods

A descriptive, exploratory qualitative study used semi-structured interviews with 11 medical practitioners. The highest and lowest users of the Vula App were selected from seven district hospitals. Qualitative data analysis used the framework method and Atlas-ti.

Results

There were five themes: impact on the referral process, quality of care, coordination of care, continuous professional development, and how to improve the Vula App. Its use was well established in the outpatient and semi-urgent setting, but participants were hesitant to rely on it for immediate advice. Specialist advice via the Vula App enabled practitioners to manage patients remotely. The referral hand-over function had a positive impact on the coordination of care. Advice and feedback via the Vula App assisted with continuous professional development.

Conclusion

The Vula App is a useful tool to refer patients to the emergency centre and outpatient departments. It can improve the immediate quality of care and sequential coordination of care. It has the potential to enable continuous professional development. There is a need to standardise its use, to ensure electronic information flows back to the district and to integrate the data into the district's health information system

Citation

South African Family Practice https://doi.org/10.4102/safp.v64i1.5491

Patients requiring palliative care attending a regional hospital emergency centre in South Africa: A descriptive study

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Background

Globally, emergency centers (ECs) face increasing patients with palliative care (PC) needs. This is also true for South Africa. Factors include an increasingly older population, rising rates of non-communicable and infectious diseases. A paucity of data exists on local rates and reasons for patients with life limiting conditions presenting to ECs. PC and emergency medicine are established specialties, but little is known how they interface in clinical practice. This study describes the contribution of patients with life limiting conditions to the case load of an EC in a regional hospital in the Western Cape.

Methods

This was a prospective, descriptive study. All patients entering the EC over 3 months were assessed using a validated PC identification tool, developed for low-and-middle-income countries. All patients entering the EC were captured in an electronic database. Those identified to have life limiting illnesses and potential PC needs received a secondary ICD-10 code. These files were extracted and statistically analysed. Variables included diagnosis, demographics, reason for visit, and disposition.

Results

A total of 426 patient visits (4.24%) were identified. Cancer (25.8%), neurological (19.7%) and HIV (17.4%) were the most frequent diagnoses. Patients with HIV and TB were significantly younger. Physical symptoms were the most common reasons for attendance (87%), followed by social (11%) and system issues (10%). Most patients were discharged home (55%), 26% were admitted, and 13% died in the EC.

Discussion

ECs in Africa are under-resourced and uncomfortable places for patients with life limiting illnesses. System-related visits could be avoidable, as most were due to patients running out of medication or requiring procedures such as urinary catheter changes, which could be done at the local clinic. Some attended EC due to social reasons, usually due to caregivers feeling overwhelmed. Patients requiring PC make up a significant percentage of EC visits. Optimizing health systems and community home-based care could alleviate EC pressures and improve the illness experience of patients with life limiting conditions

Citation

African Journal of Emergency Medicine https://doi.org/10.1016/j.afjem.2022.08.006

Mapping access to care and identification of barriers for traumatic brain injury in a South African township

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Rationale

South Africa has a high traumatic injury burden resulting in a significant number of persons suffering from traumatic brain injury (TBI). TBI is a time-sensitive condition requiring a responsive and organized health system to minimize morbidity and mortality. This study outlined the barriers to accessing TBI care in a South African township.

Methods

This was a multimethod study. A facility survey was carried out on health facilities offering trauma care in Khayelitsha township, Cape Town, South Africa. Perceived barriers to accessing TBI care were explored using qualitative interviews and focus group discussions. The four-delay framework that describes delays in four phases was used: seeking, reaching, receiving, and remaining in care. We purposively recruited individuals with a history of TBI (n = 6) and 15 healthcare professionals working with persons with TBI. Quantitative data were analysed descriptively while qualitative data were analysed thematically, following inductive and deductive approaches.

Findings

Participants mentioned that alcohol abuse and high neighbourhood crime could lead to delays in seeking and reaching care. The most significant barriers reported were related to receiving definitive care, mostly due to a lack of diagnostic imaging at community health centres and the district hospital, delays in interfacility transfers due to ambulance delays and human and infrastructural limitations. A barrier to remaining in care was the lack of clear communication between persons with TBI and health facilities regarding follow-up care.

Conclusion

Our study revealed that various individual-level, community and health system factors impacted TBI care. Efforts to improve TBI care and reduce injury-related morbidity and mortality must put in place more community-level security measures, institute alcohol regulatory policies, improve access to diagnostics and invest in hospital infrastructures.

Citation

J Eval Clin Pract. 2022;1–1 DOI: 10.1111/jep.13793

The lived experiences of emergency care personnel in the Western Cape, South Africa during the COVID-19 pandemic: A longitudinal hermeneutic phenomenological study

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Introduction

In March 2020, the World Health Organisation declared COVID-19 a global pandemic. Shortly after the first case of COVID-19 was reported in South Africa, the Western Cape province experienced a rapid growth in the number of cases, establishing it as the epicentre of the disease in South Africa. The aim of this study was to explore emergency care personnel's lived experiences and their perceptions thereof within the context of the COVID-19 pandemic in the Western Cape province.

Methods

This study followed a longitudinal hermeneutic phenomenological approach. The convenience sample included prehospital and emergency centre medical personnel. Data were collected over a 4-month period using both one-on-one interviews and participant recorded voice recordings. Data were analysed following Ricoeur's theory of interpretation.

Results

Four themes were generated during the data analysis: 1) In the beginning, waiting for the unknown; 2) Next, change and adaptation in the workplace; 3) My COVID-19 feelings; 4) Support and connection. Participants discussed the uncertainty associated with responding to an unknown threat and a need to keep up with constant change in an overburdened work environment. Results showed high levels of uncertainty, restriction, fear, anxiety, and exhaustion. Despite these difficulties, participants demonstrated resilience and commitment to caring for patients. A need for support was also highlighted.

Conclusion

Results indicated that change, over time, resulted in adaptation to a new way of practising and keeping safe. Healthcare workers experienced intersecting consequences as frontline healthcare workers and members of the public, all of which impacted their well-being. The importance of compassion and encouragement as forms of support was highlighted in the study. Robust and sustained support structures in a time of change, low mood, and exhaustion are essential.

Citation

African Journal of Emergency Medicine https://doi.org/10.1016/j.afjem.2022.08.004

A retrospective review of calls to the Poisons Information Helpline of the Western Cape during the first 6 months of the COVID-19 pandemic in South Africa

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Background

Since the start of the coronavirus disease 2019 (COVID-19) pandemic, poison centres worldwide have reported an increase in exposures to chemicals used for infection prevention. Increased availability and use could lead to an increase in exposures. Potential effects on a South African Poison Information Helpline were unknown, therefore a study was performed to describe changes in call volume and profile of poison exposures.

Methods

A retrospective analysis was conducted on an observational database of telephone enquiries. All human-related poisoning exposure call data collected from 01 March to 31 August during 2018, 2019 and 2020 were extracted and analysed. Summary statistics were used to describe all variables.

Results

The total number of calls were 5137, 5508, and 5181 in 2018, 2019, 2020, respectively. The monthly call number during 2020 was mostly less than in 2019. More calls were received from the public calls (39.4% vs 33.1%) and for accidental exposures (65.6% vs 62.3%) increased during 2020 compared to 2019. Exposures to pharmaceuticals decreased by 14.8% from 2019 to 2020, while exposures to eucalyptus oil more than doubled from 21 in 2019 to 43 during 2020. Exposures to antiseptics and disinfectants increased by 60.4%, mainly due to hand sanitisers exposure which showed a 26-fold increase from 2019 (n = 6) to 2020 (n = 156).

Conclusion

A change in the profile of poison exposures was observed during the COVID-19 pandemic. Lockdown regulations and greater availability of antiseptics and disinfectants probably led to the increase in exposures. Although symptoms were mostly mild, the public should be educated on safe storage and proper use of all chemical

Citation

Southern African Journal of Infectious Diseases https://doi.org/10.4102/sajid.v37i1.391

The characteristics of geriatric patients managed within the resuscitation unit of a district-level emergency centre in Cape Town

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Introduction

The world's population is aging and this trend is also seen in South Africa. This increase will invariably affect acute care services. The geriatric population attending emergency centres have not been described in the South African setting. The objective was to describe the characteristics of geriatric patients presenting to the resuscitation unit of a district-level hospital in Cape Town.

Methods

All patients (≥65 years) managed within the resuscitation unit of Khayelitsha Hospital over an 8-month period (01 January–30 August 2018) were retrospective analysed. Data were collected from the Khayelitsha Hospital Emergency Centre database and by means of a retrospective chart review. Summary statistics are presented of all variables.

Results

A total of 225 patients were analysed. The median age was 71.1 years, 148 (65.8%) were female and all were residing in their family home. The majority (n = 162, 72%) presented outside office hours, 124 (55.1%) arrived by ambulance, and 94 (41.8%) had presented to the emergency centre within the previous year. Only half the patients (n = 114, 50.7%) were triaged as very urgent or higher. Most patients (n = 169, 75.1%) were admitted by in-hospital services and the in-hospital mortality was 21.8% (n = 49). Diseases related to the circulatory system (n = 54, 24.0%) were the most frequent primary diagnosis and acute kidney injury were the most frequent secondary diagnosis (n = 101, 44.9%). The most common comorbidities were hypertension (n = 176, 78.2%) and diabetes (n = 110, 48.9%), and 99 (44%) had three or more comorbidities. Polypharmacy (≥5 medications) occurred in 100 (44.4%) patients with 114 (50.7%) using medications from three or more different classes. The prevalence of hypernatremia was 2.6% and for hyponatremia 54.4%.

Conclusion

Geriatric patients managed within the resuscitation unit of a district-level hospital had a high return rate, multiple comorbidities and a high prevalence of polypharmacy and hyponatraemia.

Citation

African Journal of Emergency Medicine https://doi.org/10.1016/j.afjem.2021.11.005

Current use and perceived barriers of emergency point-of-care ultrasound by African health care practitioners

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Introduction

The African Federation of Emergency Medicine (AFEM) recommends the use of emergency pointof-care ultrasound (ePOCUS) as a core skill for health care practitioners in Africa. The study explored the use of ePOCUS by health care practitioners among AFEM members who work across Africa.

Methods

An anonymous online survey was distributed to individual members of AFEM and affiliated organisations. The questionnaire was tested by the AFEM Scientific Committee for potential content modifications prior to distribution. Summary statistics are presented.

Results

Of the 220 participants that were analysed, 148 (67.3%) were using ePOCUS. The mean age was 36 years; 146 (66%) were male; and 198 (90%) obtained their primary medical qualification in Africa. In total, 168 (76%) were doctors, and most participants (n = 204, 93%) have worked in Africa during the last 5 years. Reasons for not using ePOCUS mainly related to lack of training and problems with ultrasound machines or consumables. Most ePOCUS users (116/148, 78%) attended courses with hands-on training, but only 65 (44%) participants were credentialed (by 18 different organizations). The median score for self-perceived level of ePOCUS skills was 75 in credentialed users versus 50 in those that were not credentialed. Ultrasound in trauma was the most frequently used module (n = 141, 99%), followed by focused cardiac assessment (n = 128, 90%) and thoracic (including lung) assessment (n = 128, 90.1%). The FASH-module (Focused Assessment with Sonography for HIV/TB) was the least used (n = 69, 49%).

Conclusion

Access barriers to ePOCUS training, mentorship, equipment and consumables are still relevant in Africa. The low credentialing rate and the potential discordance between local burden of disease and ePOCUS training requires further investigation.

Citation

African Journal of Emergency Medicine https://doi.org/10.1016/j.afjem.2022.07.009

Emergency clinician output in a district hospital emergency centre: A cross-sectional analysis

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Introduction

Appropriate and efficient staffing is a cornerstone of emergency centre performance. There is however a paucity of literature describing clinician output in low- and middle-income countries with current staffing models based on anecdotal evidence. This study aimed to assess clinician output at a district level emergency centre, and how it varied depending on shift, clinician, and workload factors.

Methods

We conducted a retrospective cross-sectional study using an existing electronic patient registry, to determine the patients consulted per hour (PPH) during each clinician shift and how this is affected by various clinician, shift, and workload factors. Data was collected over three non-contiguous randomly selected four-week cycles from Mitchells Plain Hospital's electronic patient registry. Associations between PPH and various factors were assessed using ANOVA with post-hoc adjustments where appropriate. The correlation between PPH and workload metrics was calculated with the Pearson's Rank correlation test. Statistical significance was defined as $p<0.05$.

Results

A total of 1 289 clinician shifts were analysed with an overall PPH of 0.7. A significant association between PPH and shift type ($p=0.021$), clinician category ($p<0.001$) and cumulative shifts ($p<0.001$) were shown. . There was a decline in clinician output during a shift and output was significantly decreased by the number of boarders in the emergency centre but increased with higher numbers of patients waiting at the start of the shift.

Conclusion

This study describes a relatively low clinician output as compared to evidence from high-income countries and has highlighted several associations with various shift, clinician, and workload factors. The results from this study will form the basis of quality improvement interventions to improve patient throughput and will inform staff scheduling and surge planning strategies

Citation

African Journal of Emergency Medicine https://doi.org/10.1016/j.afjem.2022.05.008

After-hour trauma-radiograph interpretation in the emergency centre of a District Hospital

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Introduction

Plain radiographs remain a first-line trauma investigation. Most trauma radiographs worldwide are reported by junior doctors. This study assesses the accuracy of after-hour acute trauma radiograph reporting by emergency centre (EC) doctors in an African district hospital.

Methods

An institutional review board approved retrospective descriptive study over two consecutive weekends in February 2020. The radiologist report on the admission radiographs of adult trauma patients was compared with the initial EC interpretation. The accuracy, sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) for EC interpretation were calculated with 95% confidence intervals (95%CI). The association between reporting accuracy and anatomical region, mechanism of injury, time of investigation, and the number of abnormalities per radiograph was assessed.

Results

140 radiographs were included, of which 49 (35%) were abnormal. EC doctors recorded (95%CI) 77% (69-84%) accuracy, 38% (25-54%) sensitivity, 97% (91-99%) specificity, 86% (65-95%) PPV and 76% (71-80%) NPV. Performance was associated with the anatomical region (p=0.02), mechanism of injury (p=<0.01) time of day (p=0.04) and the number of abnormalities on the film (p=<0.01). The highest sensitivity was achieved in reports of the appendicular skeleton (42%) and in the setting of simple blunt trauma (62%). Overall accuracy was in line with the range (44%-99%) reported in the international literature.

Discussion

Accurate reporting of acute trauma radiographs is challenging. Key factors impact performance. Further training of junior doctors in this area of clinical practice is recommended. Future work should focus on assessing the impact of such training on reporting performance.

Citation

African Journal of Emergency Medicine https://doi.org/10.1016/j.afjem.2022.04.001

Prolonged casualty care: Extrapolating civilian data to the military context

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Background

Civilian and military populations alike are increasingly faced with undesirable situations in which prehospital and definitive care times will be delayed. The Western Cape of South Africa has some similarities in capabilities, injury profiles, resource limitations, and system configuration to US military prolonged casualty care (PCC) settings. This study provides an initial description of civilians in the Western Cape who experience PCC and compares the PCC and non-PCC populations.

Methods

We conducted a 6-month analysis of an ongoing, prospective, large-scale epidemiologic study of prolonged trauma care in the Western Cape (Epidemiology and Outcomes of Prolonged Trauma Care [EpiC]). We define PCC as ≥10 hours from injury to arrival at definitive care. We describe patient characteristics, critical interventions, key times, and outcomes as they may relate to military PCC and compare these using $\chi 2$ and Wilcoxon tests. We estimated the associations between PCC status and the primary and secondary outcomes using logistic regression models.

Results

Of 995 patients, 146 experienced PCC. The PCC group, compared with non-PCC, were more critically injured (66% vs. 51%), received more critical interventions (36% vs. 29%), and had a greater proportionate mortality (5% vs. 3%), longer hospital stays (3 vs. 1 day), and higher Sequential Organ Failure Assessment scores (5 vs. 3). The odds of 7-day mortality and a Sequential Organ Failure Assessment score of ≥5 were 1.6 (odds ratio, 1.59; 95% confidence interval, 0.68–3.74) and 3.6 (odds ratio, 3.69; 95% confidence interval, 2.11–6.42) times higher, respectively, in PCC versus non-PCC patients.

Conclusion

The EpiC study enrolled critically injured patients with PCC who received resuscitative interventions. Prolonged casualty care patients had worse outcomes than non-PCC. The EpiC study will be a useful platform to provide ongoing data for PCC relevant analyses, for future PCC-focused interventional studies, and to develop PCC protocols and algorithms. Findings will be relevant to the Western Cape, South Africa, other LMICs, and military populations experiencing prolonged care.

Citation

J Trauma Acute Care Surg. 2022;93: S78–S85. DOI: 10.1097/TA.0000000000003675

The contribution of family physicians to African health systems

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Background

Africa is the last region to incorporate family physicians into its health systems. They are still a relatively new concept in many countries, small in numbers and deployed in a variety of ways. There is a need for more evidence on their contribution to African health systems to guide policymakers.

Aim

The aim of this study was to review the special collection of short reports on the contribution of family physicians to African health systems, published in the African Primary Health Care and Family Medicine Journal in 2021.

Method

Seventeen short reports from eight countries were qualitatively and thematically analysed in ATLAS.ti. Codes, which were derived inductively, were organised into categories according to the World Health Organization's primary health care monitoring framework.

Results

In the domain of health system determinants, family physicians made little contribution to governance, adjustment to population health needs or financing. They did, however, contribute substantially to the capacity of the health workforce, supply of equipment, functioning of the health information system and use of digital technologies. In the domain of service delivery, they strengthened the model of care and championed systems for improving the quality of care. This translated into improved availability and utilisation of services, core functions of primary care, quality of care and patient safety.

Conclusion

Family physicians described their important contribution to service delivery in district hospitals and primary health care. This should lead to improvements in outcomes and impact for the health system. Their contribution to the concept of resilient facilities and health services needs further exploration.

Citation

African Journal of Primary Health Care & Family Medicine https://doi.org/10.4102/phcfm.v14i1.3651

An evaluation of the quality of service delivery in private primary care facilities in Nairobi, Kenya (PhD dissertation)

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Introduction

The World Health Organization (WHO) states that well-functioning primary health care (PHC) should be the foundation of effective health systems. Primary care (PC) is a subset of PHC, and is a "key process in the health system that supports first-contact, accessible, continued, comprehensive and coordinated patient-focused care."

In sub-Saharan Africa (SSA), health systems still face many challenges and PC remains poorly functioning in many countries. Measuring the quality of PC service delivery and identifying the strengths and weaknesses will help policy makers and implementers improve PC and achieve better health outcomes.

Kenya's Health Policy 2012-2030 aims to promote higher quality and better access to services, however, "quality" remains a major challenge. The private health care system provides 52% of all health care services and may have a bigger role to play in the future. In Kenya, most of the PC in the private sector is provided by general practitioners (GPs), the majority of whom do not have specialist postgraduate training. Due to diversity and fragmentation of the private PC system, there is little data on the strengths and weaknesses of key elements of PC service delivery. Hence, the new knowledge from our study is aimed at kick-starting future evaluations leading to a long term improvement in quality in service delivery in line with the existing and new health needs that are anticipated over the next few decades.

The main aim of this study was to evaluate the quality of service delivery in PC facilities by GPs in the private sector in Nairobi, Kenya. Five studies were performed to measure the key elements of quality PC: first-contact access, coordination, continuity, comprehensiveness and person-centredness. The abstracts for the five articles are provided below.

Article 1

Perceptions regarding the scope of practice of family doctors amongst patients in primary care settings in Nairobi.

Background

Primary care is the foundation of the Kenyan health care system, providing comprehensive care, health promotion and managing all illnesses across the lifecycle. In the private sector in Nairobi, PC is principally offered by general practitioners. Little is known about how patients perceive their capability. The aim was to assess patients' perceptions of the scope of practice of GPs working in private sector PC clinics in Nairobi and their awareness of the new discipline of family medicine.

Methods

A descriptive survey using a structured, self-administered questionnaire in eight private sector PC clinics in Nairobi. Simple random sampling was used to recruit 162 patient participants.

Results

Of the participants, only 30% knew the difference between FPs and GPs. There was a high to moderate confidence (>60%) that GPs could treat common illnesses, provide lifestyle advice, offer family planning and childhood immunisations. In adolescents and adults, low confidence (<60%) was expressed in their ability to manage tuberculosis, human immunodeficiency virus and cancer. In the elderly, there was low confidence in their ability to manage depression, anxiety, urinary incontinence and diabetes. There was low confidence in their ability to provide antenatal care and pap smears.

Conclusion

Patients did not perceive that GPs could offer fully comprehensive PC services. These perceptions may be addressed by defining the expected package of care, designing a system that encourages the utilisation of PC and employing family physicians.

Citation

African Journal of Primary Health care and Family Medicine https://doi.org/10.4102/phcfm.v10i1.1818

Article 2

Evaluation of the quality of service delivery in private sector, primary care clinics in Kenya.

Background

The quality of PC service delivery is an important determinant of clinical outcomes. The patients' perspective is one significant predictor of this quality. Little is known of the quality of such service delivery in the private sector in Kenya. The aim of the study was to evaluate the quality of service delivery from the patient's perspective in private sector, PC clinics in Nairobi, Kenya.

Methods

The study employed a descriptive cross-sectional survey by using the General Practice Assessment Questionnaire in 378 randomly selected patients from 13 PC clinics. Data were analysed using the Statistical Package for Social Sciences.

Results

Overall, 76% were below 45 years, 74% employed and 73% without chronic diseases. Majority (97%) were happy to see the general practitioner (GP) again, 99% were satisfied with their consultation and 83% likely to recommend the GP to others. Participants found the receptionist helpful (97%) and the majority were happy with the opening hours (73%) and waiting times (85%). Although 84% thought appointments were important, only 48% felt this was easy to make, and only 44% were able to access a particular GP on the same day. Overall satisfaction was higher in employed (98%) versus those unemployed (95%), studying (93%) or retired (94%) ($p < 0.001$).

Conclusion

Patients reported high satisfaction with the quality of service delivery. Utilisation was skewed towards younger, employed adults, without chronic conditions, suggesting that PC was not fully comprehensive. Services were easily accessible, although with little expectation of relational continuity. Further studies should continue to evaluate the quality of service delivery from other perspectives and tools.

Citation: BMC Primary Care https://doi.org/10.1186/s12875-022-01700-3

Article 3

Evaluation of the quality of communication in consultations by general practitioners in primary care settings, Nairobi, Kenya.

Background

Primary care is the starting point for patients seeking health care. High quality PC requires effective communication to support person-centredness, continuity and coordination of care, and better health outcomes. In Kenya, there is very scanty knowledge about the quality of communication in consultations by GPs in the private sector. Hence, the aim was to evaluate the quality of communication in consultations by GPs.

Methods

Descriptive, observational cross-sectional study of 23 GPs consultations in 13 primary care facilities in Nairobi. One consenting adult patient was randomly selected from the GP's list for an audio recording of their consultation. Audio recordings were assessed using the Stellenbosch University Observation Tool. The overall score for each consultation was obtained out of a maximum of 32. Data was analysed using the Statistical Package for Social Sciences version 25.

Results

The median age of the GPs was 30.0 years (IQR: 29-32) with a median of 3-years' experience after graduation (IQR=3-6). Median consultation time was 7.0 minutes (IQR=3-9). Median score of the consultations was 64.3% (IQR: 48.4-75.7). The GPs fully performed skills in gathering information, making a diagnosis and in its explanation and management. The GPs did not make an appropriate introduction, nor explore the family and social context or patient's perspective. Patients were not fully involved in the shared decision making process. Safety netting and closure was not fully addressed. There was a significant positive correlation between the consultation scores and duration of the consultations (r=0.680, p=0.001).

Conclusion

Consultations were brief, with low-to-moderate complexity and had a biomedical approach. Training in communication skills with the goal of providing person-centred care will result in higher quality consultations and PC.

Citation

British Journal of General Practice Open https://doi.org/10.3399/BJGPO.2021.0235

Article 4

The quality of primary care performance in private sector facilities in Nairobi, Kenya.

Background

Integrated health services with an emphasis on PC are needed for effective primary health care and achievement of universal health coverage. The key elements of high quality PC are first-contact access, continuity, comprehensiveness, coordination, and person-centredness. In Kenya, there is little information on these key elements and such information is needed to improve service delivery. This study aimed to evaluate the quality of PC performance in a group of private sector clinics in Nairobi, Kenya.

Methods

A cross-sectional descriptive study adapted the Primary Care Assessment Tool (PCAT) for the Kenyan context and surveyed 412 systematically sampled PC users, from 13 PC clinics. Data was analysed to measure 11 domains of PC performance and two aggregated PC scores using the Statistical Package for Social Sciences.

Results

Mean primary care score was 2.64 (SD=0.23) and the mean expanded primary care score was 2.68 (SD=0.19), implying poor overall performance. The domains of first contact-utilisation, coordination (information system), family-centredness and cultural competence had mean scores of >3.0 (acceptable to good performance). The domains of first contact (access), coordination, comprehensiveness (provided and available), ongoing care and community-orientation had mean scores of < 3.0 (poor performance). Older respondents (p=0.05) and those with higher affiliation to the clinics (p=0.01) were more likely to rate PC as acceptable to good.

Conclusion

These private sector clinics in Nairobi had a poor overall performance. Performance could be improved by deploying family physicians, increasing the scope of practice to become more comprehensive, improving access after-hours and marketing the use of the clinics to the practice population.

Article 5

General practitioners' training and experience in the clinical skills required for comprehensive primary care, Nairobi, Kenya.

Background

Quality service delivery in primary care requires availability of motivated and competent health professionals. There is a paucity of evidence on the ability of PC providers to deliver comprehensive care and no such evidence is available for GPs practising in the private sector in Kenya. Therefore, the aim was to evaluate the GPs' training and experience in the clinical skills required for comprehensive primary care.

Methods

This was a cross-sectional descriptive survey using an adapted questionnaire, originally designed for a national survey of PC doctors in South Africa. The study evaluated self-reported clinical skills performance of all 25 GPs at the 13 PC clinics in Nairobi.

Results

GPs were mostly under 40 years with less than 10 years of experience with an almost equal gender distribution. Categories with moderate performance included adult health, emergencies, communication and consultation, child health and clinical administration skills. Whilst, weak performance included surgery, ear-nose-and-throat, eyes, women's health and orthopaedics. The GPs lacked training in specific skills related to proctoscopy, contraceptive devices, skin procedures, intra-articular injections, red reflex test and use of a genogram.

Conclusion

Majority of the GPs were young with few years of clinical experience after graduation. GPs lacked training and performed poorly in some of the essential and basic skills required in PC. The gaps highlighted the need for training and broadening the model of care to offer a more comprehensive package. Training in family medicine can also be offered, which aims to deliver an expert generalist and attention should be given to health systems design and the necessary inputs required to support more comprehensive care.

Final conclusions

The patients visiting these private clinics consisted mostly of young to middle-aged adults, who were well-educated and employed. Most of the patients did not have any chronic conditions and reported their health status as good to excellent.

Overall ratings showed high satisfaction in relation to first-contact utilisation, services by the receptionists, the regular opening hours of the clinics and short waiting times. Even though patients expressed the desire to book appointments via the phone, access to this service was limited. Access to a particular GP by phone or for emergency consultations was also limited.

Utilisation and long-term affiliation with the practice was reported as good, suggesting reasonable longitudinal continuity. Patients expressed high satisfaction with care enablement and had confidence in the GPs' honesty and trustworthiness. Informational continuity was also strong, although relational continuity less so, as patients did not express a commitment to any particular GP.

Patients had limited expectations of the comprehensiveness of services offered by the GPs. Patients also reported low confidence in the GPs' ability to manage and provide care for many core aspects of PC. The clinics were not comprehensive in the range of services available and provided. The gaps were evident in areas such as chronic conditions, antenatal care, advice for lifestyle modifications, women's and men's health screening. The facilities did not offer a complete primary health care team such as access to a social worker, physiotherapist, counsellor or dietician. There was poor performance by the GPs in some of the essential and basic skills required to offer a more comprehensive package of care in areas such as women's health, ear, nose and throat, ophthalmology and orthopaedics.

The information system supported care coordination and was excellent due to an integrated electronic health record system and contributed to patient satisfaction.

GPs conducted brief consultations of low-moderate complexity and showed a substantial commitment to parallel coordination of care within the clinic. However, the quality of sequential coordination was reported as borderline and patients were rarely referred to the hospital.

Patients felt confident in and satisfied with brief bio-medical consultations. GPs were able to obtain sufficient biomedical information, make an appropriate diagnosis, as well as formulate and explain an appropriate management plan. However, there were gaps in the provision of whole-person medicine related to the patient's perspectives and context, exploration of patient's psychosocial and occupational history, shared decision making process, provision of safety netting and closure. Patients, however, felt that GPs were sufficiently family-centred and culturally competent.

The combined observations of all these studies confirm that this private health care system is not offering fully accessible, continuous, coordinated, comprehensive and person-centred primary care. A number of recommendations are made to improve the quality of PC.

Midwives' self-perceived confidence in their knowledge and skills in Kenya: An observational cross-sectional study

Edna Tallam, Doreen Kaura, Robert Mash (rm@sun.ac.za)

Background

Midwives' confidence in the requisite knowledge, skills and behavior acquired during training is essential for high-quality pregnancy and childbirth care and positive experiences by women and newborns.

Purpose

Assess the midwives' self-perceived confidence in their knowledge and skills based on ICM competencies in Kenya.

Methods

An observational cross-sectional study among 576 midwives from 31 public hospitals using a self-administered questionnaire. Confidence categorized as low, moderate or high and relationships between confidence and midwives' characteristics tested by Kruskal-Wallis tests.

Findings

A total of 495 (85.9%) midwives participated in the study with a median age of 37.0 (32.0–43.0). Most of the midwives were diploma nurse/midwives (295, 59.6%) followed by degree nurse/midwives (156, 31.5%) and diploma midwives (44, 8.9%). Majority of the midwives had high confidence in knowledge (57.2%) and skills (62.0%) in the labor and birth domain while the general competency domain had the least confidence in knowledge (30.5%) and skills (36.6%). Male midwives reported high confidence in skills compared to females (57.7% vs 45.0%, P = 0.036) with no differences in knowledge (P = 0.148). Midwives in tertiary hospitals reported higher confidence in knowledge and skills compared to those at county/sub-county hospitals (P < 0.001). There were significant differences between midwives' qualifications and confidence in knowledge on the general competency domain (P = 0.02) and skills in the labor and birth domain (P = 0.017).

Conclusions

Labour and childbirth domain and working in tertiary facilities were associated with high confidence in knowledge and skills. In-service capacity building opportunities for midwives to build their confidence in obstetric care is needed.

Citation

International Journal of Africa Nursing Sciences https://doi.org/10.1016/j.ijans.2021.100387

Self-perceived competency of midwives in Kenya: A descriptive cross-sectional study

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Background

Midwifery competence is demonstrated in the context of midwifery education, regulation and practice to support the quality delivery of care to women. Midwives with appropriate competencies can deliver up to 80% of maternal health services. The pre-service education programmes in Kenya offers different midwifery competencies for the various programmes, influencing expected outcomes in practice.

Aim

This study aimed to assess midwives' perceived level of competence based on the International Confederation of Midwives (ICM) standards in Kenya.

Setting

The study was conducted in selected public health facilities in Kenya.

Methods

An observational cross-sectional design was used. A multi-stage sampling technique was used to select the counties and health facilities and random sampling to determine 576 midwives. Data were collected using a self-administered assessment tool adopted from the ICM competency domains.

Results

A total of 495 (85.9%) midwife respondents participated in this study, of which 389 (78.6%) respondents in all training categories were highly competent in the four ICM domains. The midwives' qualifications and facility level were associated with their self-perceived competence during practice. Those trained in the direct-entry midwifery programme were more competent, p = 0.016 (Kruskal wallis H = 8.432).

Conclusion

Midwives' competence was influenced by the level of education and facility where they practice. All pre-service midwifery programme graduates must meet the essential ICM competencies and need to enhance continuous professional development (CPD) programmes and facility-based mentorship for the midwives.

Contribution

To optimise midwifery-led practice in primary health care, midwifery competence should be enhanced in pre-service and in-service education for improved health outcomes.

Citation

African Journal of Primary Health Care & Family Medicine https://doi.org/10.4102/phcfm.v14i1.3477

The role of community health workers in palliative care in a rural subdistrict in South Africa

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Background

Effective palliative care is an urgent humanitarian need, particularly in less developed countries, including South Africa (SA). People can be palliated within their communities, motivating the integration of palliative care into primary healthcare systems. While community health workers (CHWs) play a vital role in health coverage at the primary care level, literature on their roles in palliation is limited.

Aim

To explore the roles of CHWs in palliative care delivery in a rural subdistrict in SA.

Setting

This study was conducted in the George subdistrict of the Western Cape province, SA.

Methods

A descriptive qualitative study explored the perceptions of a wide range of stakeholders (n = 39) of CHWs' roles in palliative care. Data were collected via semistructured interviews and focus group discussions and analysed thematically.

Results

Patients experienced severe biopsychosocial symptoms and needed home-based palliation. While CHWs identified and referred patients, their main responsibilities were health promotion and disease prevention. Palliation was primarily a registered nurse's function. Community health workers were conflicted by their limited ability to deliver basic palliative care to patients.

Conclusion

While there is a definite need for community-based palliative care, the optimal structure of such a service and the roles of CHWs therein are uncertain. Future research should explore the home-based palliation needs of patients in similar contexts and the service design best suited to address these needs within the primary healthcare domain.

Contribution

This study illustrates the influence of individual and system-related factors on CHWs' roles in palliative care. It can inform service design to optimise CHWs' contribution to palliation within primary health care.

Citation

African Journal of Primary Health Care & Family Medicine https://doi.org/10.4102/phcfm.v14i1.3657

The perceived contribution of private specialist outreach and support services at a rural district hospital in the Garden Route district of South Africa (MMed research assignment)

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Background

A major disparity exists in access to specialized healthcare between rural and urban areas. Specialist outreach programmes are one of the ways in which rural specialist healthcare inequality is being addressed. A number of rural district hospitals (RDH) in South Africa employ local, private specialists (LPS) on a part-time basis to supplement public specialist outreach. Limited research exists on private specialist outreach and support (PSOS) in Sub-Saharan Africa or South Africa.

Aim

To explore the contribution of private specialist outreach and support to health services in a rural district hospital in South Africa.

Setting

The study was based in the rural setting of the Knysna and Bitou sub-districts of the Garden Route district, Western Cape. Knysna provincial hospital (KPH) is a 90-bed district hospital and the only public sector hospital in both sub-districts. George regional hospital (GRH) is the referral hospital for KPH, situated 65 kilometres away, one hour by road transport.

Methods

This was a descriptive, exploratory, qualitative study using thematic analysis of semi-structured interviews. Four categories of stakeholders were selected. Non-probability, purposive sampling was used to obtain a sample size of 16 participants, where data saturation was reached. The audio recordings were transcribed verbatim and analysed with the framework method and ATLAS.ti version 8© supporting software. Guba's model for assessing the trustworthiness of the data was applied.

Result

Four major themes emerged, namely roles of LPS, effects, sustainability and feasibility of PSOS. Overall PSOS was considered sustainable, feasible and had positive effects in and beyond the sub-districts. The value of PSOS was supported by improved access and timeliness of services, improved competency of RDH medical practitioners, positive effects beyond the sub-district, improved coordination, comprehensiveness and continuity of care, and improved attitudes of RDH staff at work. PSOS was, however, associated with increased burden on the RDS resources and required a basic level of RDH infrastructure to function effectively. PSOS was associated with additional cost to the RDH and district but was associated with several financial benefits to the health system and patients.

Conclusion

The contribution of PSOS was positive overall. Implementation of PSOS in RDHs where no PSOS exists is feasible, but should involve consideration of factors in the RDH, town, sub-district and district prior to implementation.

Educational **research**

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Evaluating postgraduate family medicine supervisor feedback in registrars' learning portfolios

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Background

Postgraduate supervision forms a vital component of decentralised family medicine training. While the components of effective supervisory feedback have been explored in high-income countries, how this construct is delivered in resource-constrained low- to middle-income countries has not been investigated adequately.

Aim

This article evaluated supervisory feedback in family medicine registrars' learning portfolios (LPs) as captured in their learning plans and mini-Clinical Evaluation Exercise (mini-CEX) forms and whether the training district or the year of training affected the nature of the feedback.

Setting

Registrars' LPs from 2020 across five decentralised sites affiliated with the University of the Witwatersrand in South Africa were analysed.

Methods

Two modified tools were used to evaluate the quantity of the written feedback in 38 learning plans and 57 mini-CEX forms. Descriptive statistics, Fisher's exact and Wilcoxon rank-sum tests were used for analysis. Content analysis was used to derive counts of areas of feedback.

Results

Most learning plans (61.2%) did not refer to registrars' clinical knowledge or offer an improvement strategy (86.1%). The 'extent of supervisors' feedback' was rated as 'poor' (63.2%), with only 14.0% rated as 'good.' The 'some' and 'no' feedback categories in the mini-CEX competencies ($p < 0.001$ to $p = 0.014$) and the 'extent of supervisors' feedback' ($p < 0.001$) were significantly associated with training district. Feedback focused less on clinical reasoning and negotiation skills.

Conclusion

Supervisors should provide specific and constructive narrative feedback and an action plan to improve registrars' future performance.

Contribution

Supervisory feedback in postgraduate family medicine training needs overall improvement to develop skilled family physicians.

Citation

African Journal of Primary Health Care and Family Medicine https://doi.org/10.4102/phcfm.v14i1.3744

Perceptions of resources available for postgraduate family medicine training at a South African university

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Background

Clinical training is one of the roles of family physicians (FPs) in decentralised postgraduate training. Effective training requires skilled trainers and sufficient resources. Little is known about the resources available for decentralised clinical training in district health systems in low- to middle-income countries, especially in sub-Saharan Africa.

Aim

To explore FPs' and registrars' perceptions of the available resources in a decentralised postgraduate family medicine (FM) training programme.

Setting

Five decentralised training sites affiliated with the University of the Witwatersrand across two provinces in South Africa.

Methods

This qualitative study forms part of a broader project evaluating a FM registrar training programme using the logic model. Semistructured interviews were conducted with a purposive sample of 11 FPs and 11 registrars. The interviews were transcribed verbatim and analysed thematically.

Results

Three themes were identified: 'Impact of resource constraints', 'Family physicians' skills and knowledge could be further improved' and 'Family physicians need additional support to optimise their training role'. The additional resources needed include more FPs, equipment, infrastructure and funding. Knowledge and skills of FPs were reported variable and needed further improvement. Additional support was required from peers, the district management and the university.

Conclusion

Well-resourced decentralised training environments with sufficient skilled trainers and adequate resources are needed to positively influence FP training and supervision, especially in middle-income countries like South Africa.

Contribution

Clinical trainers need adequate resources and support from peers, district management and the university for effective decentralised clinical training.

Citation

African Journal of Primary Health Care and Family Medicine https://doi.org/10.4102/phcfm.v14i1.3746

Perceptions of postgraduate family medicine supervision at decentralised training sites, South Africa

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Background

Specialist training in family medicine (FM) is growing rapidly in sub-Saharan Africa. The strong emphasis on workplace-based learning for speciality training makes it vital to gain in-depth insights into registrar supervision. Previous studies have explored aspects of supervision at decentralised sites in high-income countries, however, little is known about the benefits and constraints of decentralised postgraduate supervision in low- to middle-income countries, especially in Africa.

Aim

This study aimed to explore family physicians' and registrars' perceptions of the strengths and challenges of clinical and educational supervision across decentralised training sites.

Setting

The study was conducted across two provinces at five decentralised training sites affiliated with the University of the Witwatersrand, Johannesburg.

Methods

This qualitative study involved semi-structured interviews with a purposive sample of 11 FPs and 11 registrars. The data were thematically analysed.

Results

Two of the four themes identified, 'supervision is context-specific and supervisor-dependent', and 'the nature of engagement matters', involved strengths and challenges. The other two, 'supervision is not ideal' and 'the training environment is challenging', focussed on challenges.

Conclusion

Supervisors and registrars described the postgraduate FM supervision as context-specific and supervisor-dependent. Supervisors displayed good clinical-teacher characteristics and supervisory relationships. However, several challenges, including registrars' workload, resource shortages and a lack of standardisation across training sites, need to be addressed. Regular faculty development is essential for supervisors to be aware of relevant aspects of, and current trends in, postgraduate training.

Citation

African Journal of Primary Health Care and Family Medicine https://doi.org/10.4102/phcfm.v14i1.3111

To explore the value that medical student training adds to primary health care in the Cape Metropole (MMed research assignment)

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Background

Value added medical education is where medical students add value and capacity to the health care delivery system, whilst being educated to become medical practitioners, who will serve similar communities in the future. Stellenbosch University (SU) medical students have been doing Community Based Education (CBE) since 1990 and have been visiting various Primary Health Care (PHC) sites in the Cape Metropole for training.

Aim

This research aims to explore the value medical students add to PHC facilities in the Cape Metropole.

Setting

The study was conducted in the Cape Metropole from January to April 2022.

Methods

This was an exploratory qualitative research study. Interviews were conducted with Family Physicians (FPs) at the facilities where SU students attend as part of their training.

Results

The medical students add value to educational processes of staff, patient care, the multidisciplinary team, the community and the health system. The FPs have challenges with increasing student numbers and limited infrastructure.

Conclusion

The FPs have expressed how having students at their facilities enrich the patient experience, create a culture of learning and have challenged FPs to stay abreast with the latest medical developments. While the increased number of students poses some challenges and the limited PHC infrastructure, medical student training at PHC facilities does not only add value to patients, the community, the multidisciplinary team and the PHC staff but also to the health system as a whole, introducing new ideas and navigating change.

Basic **research**

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The acceptability of delayed consent for prehospital emergency care research in the Western Cape province of South Africa

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Background

Informed consent is an essential prerequisite for enrolling patients into a study. Obtaining informed consent in an emergency is complex and often impossible. Delayed consent has been suggested for emergency care research. This study aims to determine the acceptability of prehospital emergency care research with delayed consent in the Western Cape community of South Africa.

Methods

This study was an online survey of a stratified, representative sample of community members in the Western Cape province of South Africa. We calculated a powered sample size to be 385, and a stratified sampling method was employed. The survey was based on similar studies and piloted. Data were analysed descriptively.

Results

A total of 807 surveys were returned. Most respondents felt that enrolment into prehospital research would be acceptable if it offered direct benefit to them (n = 455; 68%) or if their condition was life-threatening and the research would identify improved treatment for future patients with a similar condition (n = 474; 70%). Similar results were appreciable when asked about the participation of their family member (n = 445; 66%) or their child (n = 422; 62%) regarding direct prospects of benefit. Overwhelmingly, respondents indicated that they would prefer to be informed of their own (n = 590; 85%), their family member's (n = 593; 84%) or their child's (n = 587; 86%) participation in a study immediately or as soon as possible. Only 35% (n = 283) agreed to retention data of deceased patients without the next of kin's consent.

Conclusion

We report majority agreement of respondents for emergency care research with delayed consent if the interventions offered direct benefit to the research participant, if the participant's condition was life-threatening and the work held the prospect of benefit for future patients, and if the protocol for delayed consent was approved by a human research ethics committee. These results should be explored using qualitative methods.

Citation

PLoS ONE 17(1): e0262020. https://doi.org/10.1371/journal.pone.0262020

Mapping research outputs to previously defined research priorities in an emergency care academic community of practice in Cape Town, South Africa

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Background

Developing emergency care systems in Africa requires high quality contextual evidence to guide local policies. We sought to map research outputs from the divisions of emergency medicine at the University of Cape Town (UCT) and Stellenbosch University (SU) between 2015-2020 to the list published by van Hoving et al (2015) following a modified Delphi study identifying research priorities in South African emergency medicine.

Methods

This study utilised an evidence mapping approach to map a database of research outputs from UCT and SU Divisions of Emergency Medicine between 2015 and 2020. The Google Scholar, Scopus and the Web of Science databases were searched for research outputs with authors affiliated to either Division. Research outputs were mapped against the proposed research priorities outlined by van Hoving et al (2015).

Results

During the study period, 276 publications and 107 dissertations/theses were produced by the Divisions of Emergency Medicine at UCT and SU. In total, 42% of the dissertations/theses had been published in a journal at the time of this study. Only 7% of the research publications mapped to the research priorities identified in the 2015 study in both research statement and study design, while 4% of the publications mapped to the priority list in research statement alone. Only 8,4% of the dissertations/theses mapped to the previously identified research priorities in both research statement and study design and only one mapped to the list by research statement alone. Common themes identified in the research outputs were (i) Prehospital emergency care, (ii) clinical emergency care, (iii) general systems and safety management, (iv) education and training, (v) research and (vi) policies and frameworks.

Conclusion

Few of the research outputs in our database mapped to the proposed research priorities list. This evidence map allows for identification of ongoing knowledge gaps and will inform future agenda setting.


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